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## Transit of an exoplanet:

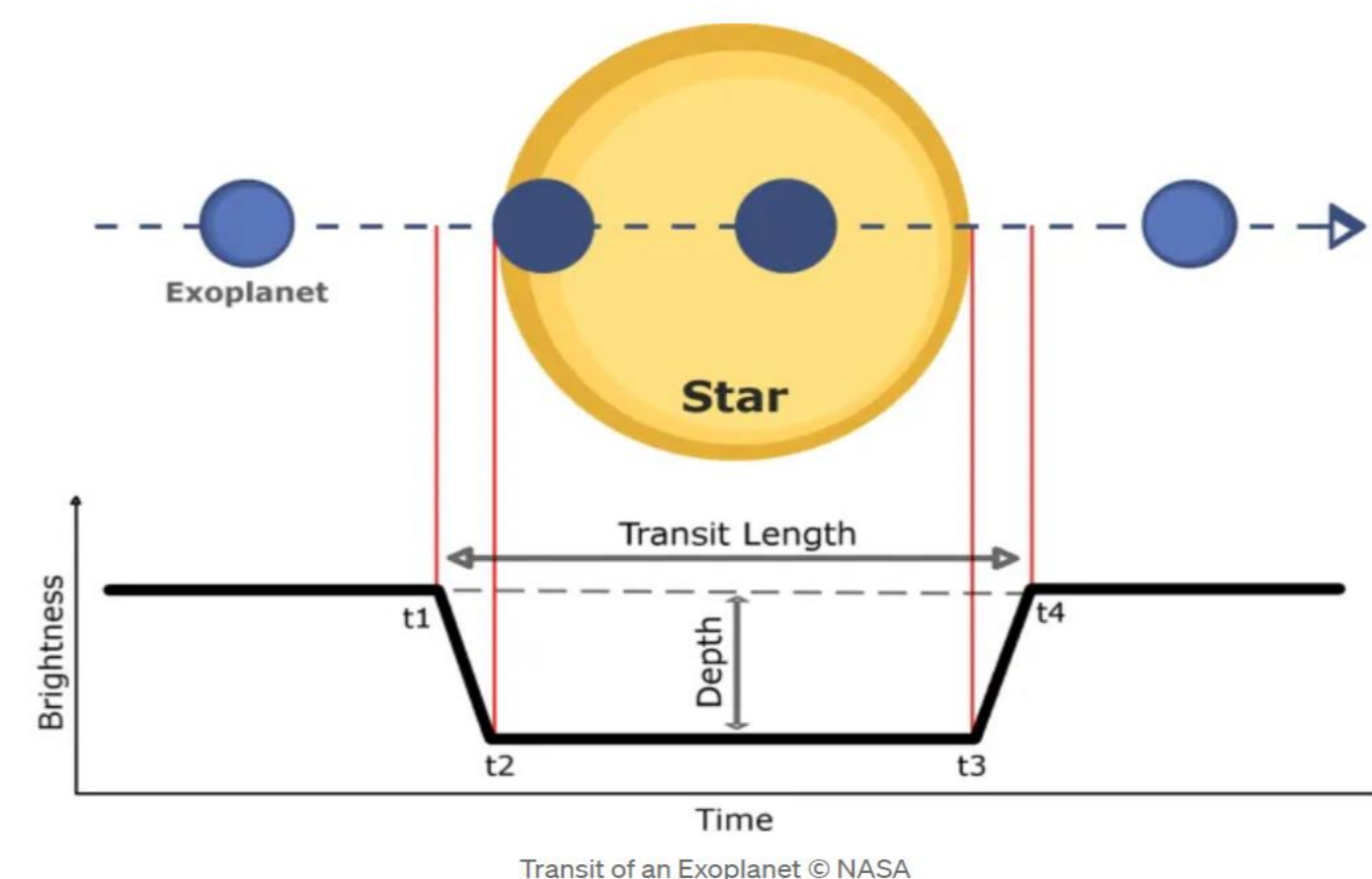
### Exoplanet XO-6b size measurements.

#### 1.- AIM OF THE PROJECT

Take advantage of the expertise of the researchers of the *Parc Astronòmic del Montsec*<sup>1</sup> to develop a project with our students and introduce Astronomy.

Develop a 10-hour training with secondary and upper primary school teachers to implement astronomy as STEAM backbone.

<sup>1</sup>Kike's Herrero (PAM)

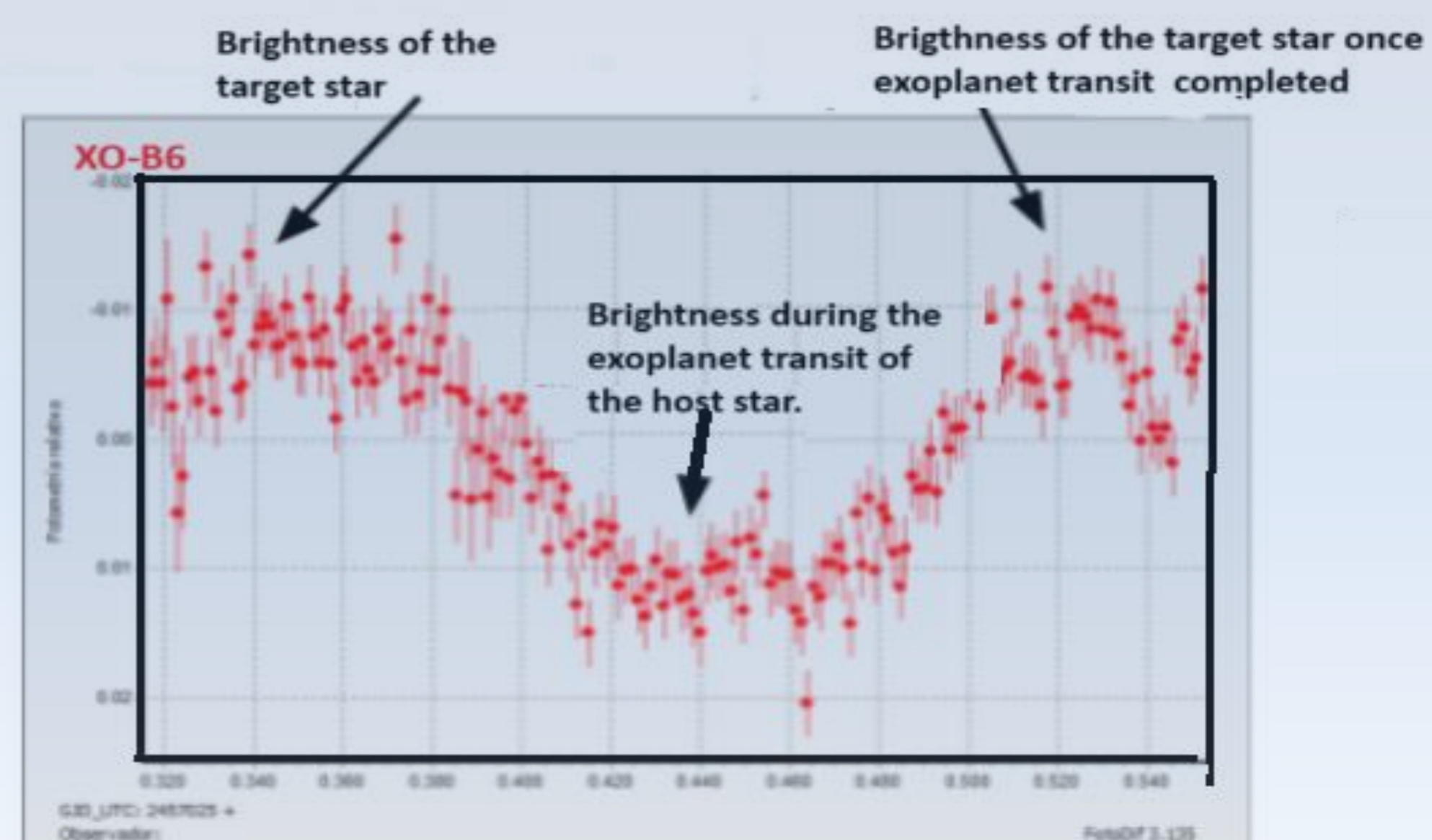


The **transit of an exoplanet** occurs when the planet passes in front of its host star, promoting a **star's light intensity reduction**. It can be represented by a **light curve**.

#### 2.- DATA

The XO-6b light curve study allow us to establish:

- The amount of light a planet blocks in transit, the transit depth ( $\delta$ ).
- The transit depth + the size of its host star allows to calculate the **size** of the exoplanet
- -The duration of the transit



#### 3.- STUDENTS MODELIZATION

The transit of different size exoplanets, on the same star, affect its intensity, being represented on different transit depths.



ADAPTED FROM:  
<https://science.nasa.gov/resource/exoplanet-detection-transit-method/?simple=True>

- It was carried out by 14-15years old students.
- Results can be obtained with simple analysis methods.
- Provides a simple way to introduce astronomy concepts specifically extrasolar planets in highschool classrooms.